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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/549,551	04/14/2000	Takayuki Hasebe	1341.1044/JDH	9207
21171	7590	05/10/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			KIM, JUNG W	
			ART UNIT	PAPER NUMBER
			2132	

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/549,551

Applicant(s)

HASEBE ET AL.

Examiner

Jung W. Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 3-12 and 17 are pending.
2. Applicant amended claims 1, 12 and 17 in the amendment filed on April 8, 2005.
3. Claims 2 and 13-16 have been canceled.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

5. Applicant's arguments filed April 8, 2005 (Remarks) have been fully considered but they are not persuasive.

6. Applicant remarks on pg. 1, 5th paragraph:

Applicant's are having difficulty understanding how U.S. Patent No. 5,189,700 to Blandford relates to the present invention and how the Examiner is relying upon the reference. If the Examiner decides to maintain the rejection, it is requested that clarification be provided regarding how Blandford relates to the invention.

7. First, it's noted that determination of patentability of applicant's application over the prior art compares applicant's *claimed* invention with the prior art; there is no determination by the examiner of all possible variations of the invention disclosed in applicant's specification with the prior art.

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8. Second, the Blandford prior art reads on the limitations of claim 1 by, inter alia, creating a digital signature (authentication code) using connection data and a key (7:27-54, esp. 7:36-37), wherein the connection data comprises plain-text (Blandford teaches using either the plaintext or a hash of the plaintext [see col. 4:13-14]), time information (time information), apparatus ID (authentication device ID), and personal identification information (user signature), which are connected in a predetermined order (fig. 1 and related text; 4:3-8; 7:16-22; 7:39-65). These relations, and others, are outlined below in the section under Claim rejections 35 U.S.C. 103.

9. On pg. 1, 6th paragraph, Applicant argues:

Amended independent claim 1 requires that the apparatus ID be stored in a data form capable of preventing interpolation. The examiner cites column 5, lines 37-41 of Blandford. This portion of the reference indicates that the components are packaged or sealed in a manner which makes them and their stored data physically inaccessible. Clearly, this is different from storing the apparatus ID using a data form capable of preventing interpolation.

10. First, it is noted that "data form" is a new issue.

11. Second, applicant only provides a bald conclusionary statement that the disclosure of Blandford does not meet the limitation of a "data form to prevent interpolation". This does not provide a rational or basis by which to define the new limitation; and hence, does not establish the irrelevance of the indicated portion of Blandford.

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12. Third, the only portion of the disclosure that provides light on the limitation “an ID storing unit which stores an apparatus ID for specifying the creating apparatus using a data form capable of preventing interpolation” is found on pg. 9, 1st paragraph and pg. 53, 1st paragraph, which discloses “Further, the apparatus ID is stored in an unrewritable storage unit (for example, one-time ROM), interpolation of the apparatus ID can be prevented.” However, the claims also recite “the personal identification information is stored within the signature creating apparatus using a data form capable of preventing interpolation” (claim 1), and a relevant portion of the specification discloses “A personal identification information update section 108 updates (input, change) the personal identification information D stored in the personal identification information storage section 107 based on personal identification information inputted from the outside.” (pg. 20, 1st sentence). Hence, under the broadest reasonable interpretation consistent with applicant’s specification, sealing the data repositories for the apparatus ID and the personal identification information is within the scope of “data form to prevent interpolation”. MPEP 2111; see also MPEP 2111.01 “Plain Meaning”.

13. Finally regarding applicant’s argument Blandford nor Hartman discloses creating a signed data by connecting the digital signature with the connection data (pg. 2, 3rd full paragraph), this argument is moot as a new grounds of rejection are made in view of Blandford, Hartman and Camion USPN 5,097,504.

Response to Amendment

14. The objection to claim 1 is withdrawn as the amended claim overcomes the objection.

Claim Rejections - 35 USC § 112

15. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

16. Claims 1, 2-12 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The amended independent claims recite the limitation wherein "personal identification information is stored within the signature creating apparatus using a data form capable of preventing interpolation" (claim 1); the specification reasonably provides support for the preamended limitation "using a form capable of preventing interpolation": since only persons having the proper right can update the personal identification information (Specification, pg. 20, 1st paragraph); but does not provide support using a "data" form to prevent interpolation. Also, there exists a degree of ambiguity because the claims also recite the limitation wherein "an ID storing unit which stores an apparatus ID for specifying the creating apparatus using a data form capable of

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preventing interpolation" (claim 1); however, the specification only supports this limitation such that the storage unit is unrewritable (Specification, pg. 9, 1st paragraph).

Claim Rejections - 35 USC § 103

17. Claims 1, 3, 10, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blandford USPN 5,189,700 (hereinafter Blandford) in view of Hartman, Jr. USPN 5,444,780 (hereinafter Hartman) and Camion et al. USPN 5,097,504 (hereinafter Camion).

18. As per claim 1, Blandford discloses a signature creating apparatus which creates a digital signature (col. 7:17-22), the signature creating apparatus comprising:

- a. a clock presenting time information (fig. 1, ref. no. 13);
- b. an ID storing unit which stores an apparatus ID for specifying the creating apparatus using a data form capable of preventing interpolation (5:37-54, esp. 5:37-41; 6:4-7);
- c. a personal identification storing unit which stores personal identification information (fig. 1, ref. nos. 8 and 10; 7:17-38);
- d. a connection unit which creates connection data by connecting plain-text, the time information, the apparatus ID, and the personal identification information that identifies a person using the creating apparatus in a predetermined order (fig. 1 and related text; 4:3-8; 7:16-22; 7:39-65); and

- e. a signature creating unit which creates the digital signature using the connection data created by the connecting unit and a key used only for creating a digital signature (7:27-54, esp. 7:36-37),
 - f. wherein the personal identification information is stored within the signature creating apparatus using a data form capable of preventing interpolation, and the signature creating unit encrypts the connection data to create the digital signature (7:25-55).
2. Further, Blandford, discloses the clock is to be resettable only under a carefully prescribed procedure and by an operator with knowledge of the correct password to update the clock, but does not elaborate on the authority of the operator. Blandford, 6:25-54. Hartman teaches a timekeeping authority system wherein a independent trusted time authority initializes the timekeeping facilities of its clients. See Hartman, 2:65-4:10, esp. 2:65-3:17. It would be obvious to one of ordinary skill in the art at the time the invention was made for the time information to only be set by an external time authentication authority, since it ensures a more secure time setting methodology by enabling only a trusted time authentication authority to update the clock used in the signature creation steps as taught by Hartman. Ibid.
3. Further, Blandford does not expressly disclose the personal identification information specifies a person who has a proper right to update stored contents. However, it is notorious well-known in the art for personal identification information to specify a person who has a proper right to update stored contents. For example, in the UNIX operation system, users are assigned a UID that specifies access rights to update

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stored information including: user password and file access privileges on personal files.

It would be obvious to one of ordinary skill in the art at the time the invention was made for the personal identification information to specify a person who has a proper right to update stored contents. Motivation to combine includes, inter alia, mapping a user identifier with a typical user role as known to one of ordinary skill in the art.

4. Finally, Blandford teaches making available to the user the original data used to create the digital signature as well as the digital signature to be transmitted to an external network (Blandford, 4:38-44; fig. 1, reference no. 18), but does not disclose creating signed data by connecting the digital signature with the connection data. However, appending digital signatures of messages to the message to create a "signed message" are well known implementations in the art. For example, Camion discloses sealing plaintext data by connecting the plaintext data with a digital signature representative of the plaintext data. Camion, 4:5-10; fig. 1. It would be obvious to one of ordinary skill in the art at the time the invention was made to append the digital signature to the original information, thereby creating a signal data, which the user can use to verify the created signature. Camion, *ibid*. The aforementioned cover the limitations of claim 1.

5. As per claim 3, Blandford covers an apparatus as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the apparatus further comprises:

- g. a storage unit which stores the personal identification information (Blandford, 5:55-6:4; 7:23-38);

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- h. a judging unit which judges as to whether or not a person who updates stored contents of the storage unit is a person who has proper right (Blandford, 6:41-43); and
- i. an updating unit which updates the stored contents of the storage unit only when the judging unit has judged that the person who updates is the person who has proper right (Blandford, 6:41-53).

The aforementioned cover the limitations of claim 3.

6. As per claim 10, Blandford covers an apparatus as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the apparatus further comprises a setting unit which sets the time information according to a time setting request, the setting unit being installed in the time authentication authority. Hartman, fig. 2, ref. no. 224 and related text; 3:46-4:10; 4:64-5:36. The aforementioned cover the limitations of claim 10.

7. As per claim 11, Blandford covers an apparatus as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the apparatus further comprises a correcting unit, which corrects the clock automatically, the correcting unit being installed in the time authentication authority. Hartman, fig. 2, ref. no. 224 and related text; 3:4-9, 3:34-62. The aforementioned cover the limitations of claim 11.

8. As per claim 12, it is an apparatus claim covered by the invention covered in the claim 1 rejection and it does not teach or define above the information defined in the

invention as outlined in the claim 1 rejection. Therefore, claim 12 is rejected under Blandford in view of Hartman and Camion for the same reasons set forth in the rejection of claim 1.

9. As per claim 17, it is an apparatus claim corresponding to claim 1 and it does not teach or define above the information claimed in claim 1. Therefore, claim 17 is rejected under Blandford in view of Hartman and Camion for the same reasons set forth in the rejection of claim 1.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blandford in view of Hartman and Camion, and further in view of Ugon USPN. 4,295,041 (hereinafter Ugon).

11. As per claim 4, Blandford covers an apparatus as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). Blandford does not expressly state where the apparatus ID is stored; however, the only possible storage locations are either the RAM or the PROM. Blandford, fig. 1, ref. nos. 10 and 12. Further, it is well known in the art for sensitive information to be stored in read-only memory to prevent modification of sensitive information. For example, Ugon discloses an apparatus wherein the sensitive information is stored in the PROM. Ugon, fig. 1, ref. no. 2 and related text. It would be obvious to one of ordinary skill in the art at the time the invention was made for the apparatus ID to be stored in an unrewritable storage unit. Motivation to combine

includes, inter alia, ensuring the ID is not tampered with after it is initially stored as known to one of ordinary skill in the art and as taught by Ugon. Ibid. The aforementioned cover the limitations of claim 4.

12. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blandford in view of Hartman and Camion, and further in view of Fisher USPN 5,422,953 (hereinafter Fisher).

13. As per claim 5, Blandford covers an apparatus as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). Blandford does not expressly teach creating a digital signature only when the confirming unit confirms that the clock works normally. Fischer discloses a personal date/time notary device wherein the device comprises a confirming unit that confirms a working state of the clock and creates a digital signature only when the confirming unit confirms that the clock works normally. Fischer, 4:42-63, esp. 4:46-48. It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Fischer to the apparatus of Blandford. Motivation to combine includes, inter alia, preventing the creation of faulty digital signatures based on an invalid timestamp as taught by Fischer. Ibid. The aforementioned cover the limitations of claim 5.

14. As per claim 8, Blandford covers an apparatus as outlined above in the claim 5 rejection under 35 U.S.C. 103(a). In addition, the confirming unit confirms the working

state of the clock based on a result of comparing a time-counted result of the clock before certain time and a time-counted result at current time. Fischer, 4:64-5:29.

15. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blandford in view of Hartman, Camion and Fischer, and further in view of Boll USPN 4,230,958 (hereinafter Boll).

16. As per claim 7, Blandford covers an apparatus as outlined above in the claim 5 rejection under 35 U.S.C. 103(a). Blandford is silent on the matter of confirming the working state of the clock based on a result of comparing a driving voltage of the clock with a threshold. However, in the analogous art of semiconductor detector circuits, Boll teaches an invention wherein the working property of a clock is determined by comparing the voltage of the clock with a threshold value. Boll, Abstract; 1:23-44. It would be obvious to one of ordinary skill in the art at the time the invention was made to confirm the working state of the clock based on a result of comparing a driving voltage of the clock with a threshold. Motivation to combine includes, inter alia, enabling determination of proper clock operation based on a sample measurement of the clock's driving voltage as taught by Boll. Ibid. Moreover, this clock confirmation is distinct from other clock confirmation steps in that it checks if the clock is properly furnishing expected periodic pulses. Boll, 1:35-40. The aforementioned cover the limitations of claim 7.

17. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blandford in view of Hartman, Camion and Fischer, and further in view of Whitely USPN 4,254,469 (hereinafter Whitely).

18. As per claim 9, Blandford covers an apparatus as outlined above in the claim 5 rejection under 35 U.S.C. 103(a). Blandford does not expressly teach using a flag to indicate whether or not the clock is functioning properly. However, the incorporation of a flag to indicate whether a failure has or has not occurred in the system is a conventional feature of the art. As an example, in the analogous art of error correction, Whitely discloses setting a flag to indicate a system failure wherein the flag generates an abort response when the flag is set. Whitely, 5:54-60. It would be obvious to one of ordinary skill in the art the time the invention was made to incorporate the teaching of Whitely into the apparatus of Blandford. Motivation to combine includes, inter alia, implementing standard means of indicating the status of a process or unit as known to one of ordinary skill in the art and as taught by Whitely. Ibid. The aforementioned cover the limitations of claim 9.

Allowable Subject Matter

19. The 35 U.S.C. 103(a) rejection of claim 6 is withdrawn after further review of the prior art of record; the feature wherein an alternative signature is created sans time information and using a different signature key when it is found that the clock does not work properly is not taught nor suggested in its entirety by Blandford, Hartman, Ardon

and Schneier as outlined in the previous action (specifically the limitation of using an alternative signature key is not met by the teaching of Schneier to "controlling a key's usage" [December 8, 2004; paragraph 28]: controlling a key's usage is a necessary function of the limitation and not a sufficient one). Hence, claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W. Kim whose telephone number is (571) 272-3804. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jung W Kim
Examiner
Art Unit 2132

Jk
May 6, 2005


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